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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,755	05/13/2005	Masami Kanamaru	272236US0PCT	7055
22850	7590	05/08/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LEE, RIP A	
			ART UNIT	PAPER NUMBER

1713

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/534,755

Applicant(s)

KANAMARU ET AL.

Examiner

Rip A. Lee

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 1 and 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02-16-06;05-13-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: The diction is poor. Please revise the claim language. Appropriate correction is required.
2. Claim 3 is objected to because of the following informalities: The terms f_{EEE} , [EEE], and R1·R2 need to be defined. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The terms “high crystalline” and “low crystalline” in claim 1 are relative terms which render the claim indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Claims 2-8, which depend from claim 1, are subsumed under the rejection.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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8. Claims 1, 2, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Mehta *et al.* (U.S. 6,576,306).

Mehta *et al.* teaches a process of making crystalline polymer comprising propylene homopolymer and propylene copolymer in the presence of two metallocenes (abstract). The presence of comonomer (ethylene, up to 15 wt %) reduces selectively the crystallinity of the polymer (col. 16, lines 5-26). The catalyst is supported, and a useful discussion of support materials may be located in column 13. One observes from the example that both metallocenes and MAO co-activator are deposited on silica, and polymerization of propylene is carried out prior to copolymerization of propylene and ethylene (col. 29, lines 5-17 and 25-40).

9. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mehta *et al.*

The discussion of the disclosures of the prior art of from the previous paragraph of this office action is incorporated here by reference. The reference is silent with respect to the microstructural and physical properties recited in the instant claims. However, in light of the fact that the process disclosed in the prior art is essentially the same as that of the instant claims, a reasonable basis exists to believe that the polymer exhibits essentially the same properties. Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

10. Claims 1, 2, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winter *et al.* (U.S. 5,696,045).

Winter *et al.* teaches a process of polymerization in the presence of a catalyst comprising two metallocenes and activator. Propylene homopolymer is prepared in the initial step, and subsequently, ethylene and propylene are copolymerized (example 16). The catalyst of the example is not supported, however, Winter *et al.* contemplates use of solid carriers such as silica gel, aluminum oxides, solid aluminoxanes, and mixtures thereof (col. 10, lines 4-8). Thus, it would have been obvious to one having ordinary skill in the art to use silica support in carrying out the process described in the claims because Winter *et al.* instructs that such an embodiment is

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useful for carrying out the invention. Since this is a disclosed embodiment of the invention, one of ordinary skill in the art would have expected such a modification to work equally well.

11. Claims 1, 2, 4, 5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Machida *et al.* (JP 11-29212).

Machida *et al.* discloses a process for making polyolefin in the presence of a catalyst comprising at least two kinds of group 4 metallocene, an activator, and porous support (see abstract). The catalyst is used for making block copolymer, specifically one in which different reaction conditions are used in subsequent reaction steps. To illustrate, propylene is homopolymerized in a first step, and copolymerization of propylene with a monomer selected from ethylene or C₄₊ alpha olefin is carried out in a second step (paragraph [0068]). Machida *et al.* discloses use of mono-bridged (formula I and II) and doubly-bridged (formula III and III-a) metallocenes, and useful combinations for practicing the invention include the combination of mono-bridged metallocene and doubly bridged metallocene (paragraph [0034]).

12. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machida *et al.* (JP 11-29212).

The reference is silent with respect to the microstructural and physical properties recited in the instant claims. However, in view of the fact that the process disclosed in the prior art is essentially the same as that of the instant claims, a reasonable basis exists to believe that the polymer exhibits essentially the same properties. Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

13. The subject matter of claim 6 is not reasonably disclosed or made obvious in the cited references. One of ordinary skill in the art would not have found it obvious to arrive at the specific combination of metallocenes based on the disclosure therein.

Information Disclosure Statement

14. The following references have been cited as "X" references in a European and international search reports. The subject matter of the instant claims is not anticipated by JP 2002-201322 or JP 07-173233 because neither discloses use of two metallocene components in the catalyst system. EP 707 016 teaches use of metallocene-based catalysts for polymerization of olefins. The inventors contemplate use of two metallocene compounds. This reference is, at best, a "Y" reference since there is no explicit teaching of use of a catalyst comprising two supported metallocenes for making propylene block copolymer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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May 3, 2006



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